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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,410	03/29/2001	Rabah S. Hamdi	200301997-1	3679
22879	7590	11/14/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			TSE, YOUNG TOI	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,410

Applicant(s)

HAMDI, RABAH S.

Examiner

YOUNG T. TSE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-16,18,20-32,34-45 and 47-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-16,18,20-32,34-45 and 47-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 01, 2005 has been entered.

Claim Objections

2. Claims 12, 18, 26-32, 33-45 and 47-52 are objected to because of the following informalities:

In claim 12, line 3, there should be a space between "media" and "channel".

In claim 18, line 2, "M" should be "the matrix M".

In claim 26, line 12, "and wherein" should be "wherein".

In claim 26 (line 15), claim 35 (line 2), claim 36 (line 3), claim 39 (line 15), claims 47-48 (lines 1-2), claim 49 (line 2) and claim 50 (line 3), "estimate of the impulse response" should be "estimated impulse response".

In claim 29, lines 3-4, 8, 10 and 13, "the training signal sequence" should be "the known training signal sequence"; line 12, "of X" should be "of X,"; line 13, "the of the" should be "of the"; and line 15, "response" should be "response H".

In claim 43, line 1, "a" should be "the".

Wherein the dependent claims 27-32, 34, 37-38, 40-42, 44-45, and 51-52 depend upon the independent claims 26 and 39.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-6, 8-16, 18, 20-32, 34-45 and 47-52 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The configuration of claims 1, 9, 16, 26, and 39 does not correspond to the discussion of the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With respect to claim 1, the claimed subject matters recited in claim 1 do not correspond to the language used in the specification discussed on page 7, lines 14-29. Further, claim 1 does not specify what are " y_k ", " x_{k+n} " and " g_k " recited in the equation.

With respect to claims 9, 16, 26 and 39, the amendment in each of the claims does not correspond to the previous version of the claims, especially the equation of the

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matrix M (see equation 6 on page 8 of the specification). Further, the claimed subject matters recited in claims 9, 16, 26 and 39 do not correspond to the language used in the specification according to the specification, for example, the specification defines that "X" is a known input training signal sequence.

Wherein the dependent claims 2-6, 8, 10-15, 18, 20-25, 27-32, 34-38, 40-45 and 47-52 depend upon the independent claims 1, 16, 26 and 39.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6, 8-16, 18, 20-25, 39-45 and 47-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, " y_k ", " x_{k+n} " and " g_k " are undefined.

In claim 3 (line 2-3) and claim 6 (line 2), it is unclear what is the "convergence technique(s)"? Also see claims 21-22.

In claim 16 (line 9), claims 23-24 (line 2), claim 39 (line 13), the phrases "the known training signal sequence", "the coefficients", and "the output signal" all lack antecedent basis.

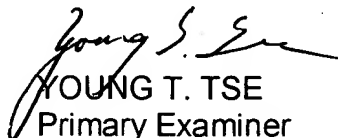
Wherein the dependent claims 2, 4-5, 8-15, 18, 20, 25, 40-45 and 47-52 depend upon the independent claims 1, 16 and 39.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-30513051. The examiner can normally be reached on Monday-Thursday and alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The Central FAX Number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YOUNG T. TSE
Primary Examiner
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